Hamilton Niagara Haldimand Brant **LHIN**
RLISS de Hamilton Niagara Haldimand Brant

Clinical Services Plan

Final Report from the Clinical Services Plan Steering Committee to the Hamilton Niagara Haldimand Brant Local Health Integration Network Board of Directors

November 2009

Ontario
Local Health Integration Network
Réseau local d'intégration des services de santé

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MESSAGE FROM THE CHAIR

On behalf of the Hamilton Niagara Haldimand Brant (HNHB) Local Health Integration Network (LHIN) Clinical Services Plan Steering Committee (the Steering Committee), I am pleased to submit our final report to the HNHB LHIN Board of Directors.

As residents of Ontario, we all depend on our health care system, one that keeps people healthy, takes good care of them when they are sick, and is sustainable for our children and our grandchildren. This vision has guided the work of the Steering Committee, and the roadmap we are proposing for an accessible, effective and sustainable health system.

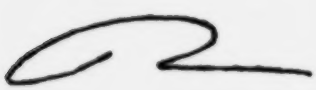
Now, and over the next ten years, the challenges for health care are enormous. Our population is aging, illness burden is high, resources are scarce, our ability to measure benefits of investments is poor, and, the economy is flat. The Clinical Services Plan (the Plan) is an action call for a healthier population, improved ways of working together for better health outcomes, and best practice organization and distribution of clinical programs.

Tough decisions will need to be made to ensure quality of health care and appropriate access to the right health services for all of us living in our LHIN. Change is inevitable. The Steering Committee applauds the HNHB LHIN Board and their commitment to ensure that not only that health care is doing things right, but that we are doing the right things.

I would like to thank everyone who participated in this process, individual residents, health service providers (HSPs), community agencies and our various health institutions. I am most grateful. The time, commitment and thoughtful inputs have all gone into the Plan.

Thank you to the LHIN staff for their diligence, dedication and support, and to the Deloitte team who provided assistance as we moved through the clinical services planning process. A special thank you to the residents of the LHIN, whose input through the Open Houses, phone calls and written input, was invaluable.

Over the next few years, health care will face many challenges. The Plan will provide the 'roadmap' to assist our LHIN as it works with all of us to ensure we have a health care system that is efficient, affordable, and of highest importance, sustainable to meet the specific needs of our HNHB LHIN population.



Richard B. Woodcock
Chair, HNHB LHIN Clinical Services Plan Steering Committee

EXECUTIVE SUMMARY

In January 2009, the HNHB LHIN launched the development of the Plan. The Plan was one of a series of initiatives to identify requirements for an accessible, effective and sustainable health system. The outcome is a three-plus year strategy map to reduce illness, improve health outcomes, and transform people's experience in the health system.

Now, and over the next ten years, the challenges for health care are enormous. Our population is aging, illness burden is high, resources are finite, our ability to measure benefits of investments is poor, and the economy is in transition. The Plan is an action call for a healthier population, improved ways of working together for better health outcomes and best practice organization, and distribution of programs.

There are three key strategies for change:

1. Interprofessional Care

HSPs will work collaboratively to provide comprehensive, quality health services within and across settings, with a strong focus on health promotion, disease prevention, screening and self-management. Interprofessional care "teams" may include social workers, nurse practitioners, family physicians, pharmacists, traditional healers, optometrists and other health care providers (HCPs) as appropriate. Care teams can be either co-located in one setting or function as a virtual team in multiple sites. Interprofessional care will enable all health professionals to work to their full scope of practice or expertise. This will optimize work place satisfaction for primary care providers and assist with training, education and recruitment of new primary care providers.

2. Community-Based Health Service Capacity

Most people will continue to get most of their health care, most of the time, in the community. Community services for health, wellness and recovery will be aligned with population health goals, such as reduced diabetes and chronic lung disease, and improved mental health. Decision support tools and improved client matching processes will link people with the appropriate level of care in the right setting. Robust and linked community services will improve patient/client flow, and reduce inappropriate demand for hospital care.

3. Clinical Program Integration

Health care programs will be reorganized and distributed to improve access, quality, and efficiency. This will eliminate, for instance, unnecessary duplication of low volume, high complexity services and ensure appropriate use of human and equipment resources. Integrated programs will be led by one or more organizations, and guided by clear roles and shared accountabilities, best practice standards and guidelines, and common protocols for client transitions along the care path.

e-health is a critical success factor for implementing interprofessional care, community capacity and clinical program integration. People want to tell their health story only once, and HCPs need accurate "real time" information for patient care decisions. Planners and policy makers rely on timely data and information for continuous quality improvement. e-health facilitates the use of common best practice guidelines in settings across the HNHB LHIN.

The Plan identifies key activities over a three year time frame to achieve change. Tough decisions will be made. The sequence of activities builds on change already in progress, readiness, Ministry of Health and Long-Term Care (ministry) priorities, and where there is high impact on improved outcomes. The Plan is informing the LHIN's Integrated Health Service Plan (IHSP) (2010-13), a three-year road map for health system improvement.

HSPs and residents agree on the need for change to improve access, quality and sustainability. We all have shared responsibility for leadership for a health system that keeps people healthy, gets them good care when they need it, and is there for our children and grandchildren.

1.0 INTRODUCTION

In 2004, the Ontario Government introduced Local Health Integration Networks (LHINs)[1] to plan, integrate, fund and monitor the local health care system, bringing a health care 'closer to home' perspective. The guiding vision of the Ontario Government and the HNHB LHIN is: "a health care system that keeps people healthy, gets them good care when they are sick, and is there for our children and grandchildren." Examples of provincial strategies that support this vision include: reducing wait times (e.g. emergency room, surgery, diagnostic scans), improving access to family health care (e.g. investments in family health teams (FHTs), community health centres (CHCs), community care access centres (CCACs) and nurse practitioner-led clinics), and chronic disease prevention and management (CDPM)). The development of local strategies to support this vision requires the HNHB LHIN to undertake an assessment of LHIN residents' future health care needs, the resources required to meet these needs, and how the resources will be organized.

In January 2009, the HNHB LHIN launched the development of the Plan to better understand the evolving health care needs of our communities, and identify new service models and integration opportunities to address those needs. The Plan provides a foundation for strategies and activities to achieve improved outcomes and foster health system sustainability. The Plan informs the HNHB LHIN IHSP (2010-13), which is a three-year roadmap for health improvement. This Plan has now been submitted by the Steering Committee to the HNHB LHIN Board of Directors for their deliberation.

The Plan is comprised of four main sections. The first section provides an overview of the guiding vision, planning process and approaches used to gather information to support the development of the Plan. The second section shares the key findings of all inputs into the Plan. The third section outlines the themes for achieving the vision and describes anticipated outcomes. The final section highlights implementation priorities for improvement.

2.0 PLANNING PROCESS

The HNHB LHIN established a Steering Committee in January 2009, to guide the development of the Plan to be presented to the HNHB LHIN Board of Directors in November 2009. The Steering Committee, chaired by Brant Community Healthcare System President and Chief Executive Officer, Mr. Richard Woodcock, was comprised of a diverse group of health care and community leaders from across the HNHB LHIN[ii,iii].

2.1 Project Goal

The Steering Committee adopted the Vision and Mission of the HNHB LHIN to guide the planning process.

HNHB LHIN Vision: "A health care system that helps keep people healthy, gets them good care when they are sick, and will be there for our children and grandchildren."

HNHB LHIN Mission: "To ensure the availability of, and access to, linked services in order to improve the health of the population and the continuity of health care."

2.2 Inputs

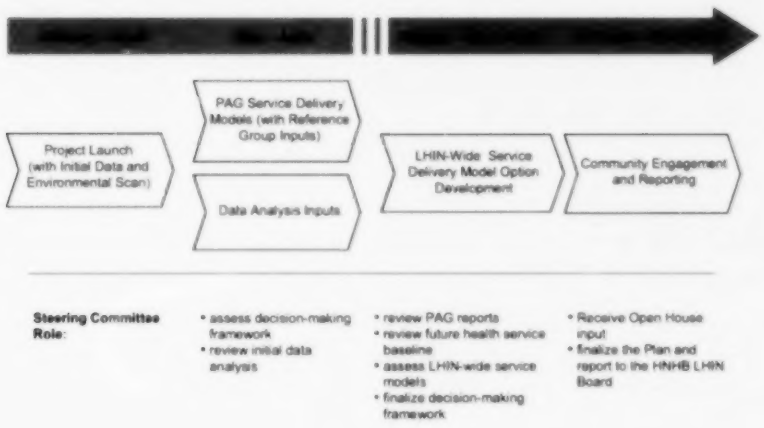
Key inputs into the Plan included:

- 18 Planning Advisory Groups (PAGs) comprised of leaders from clinical, community, and academic settings related to specific clinical areas such as Cardiac and Endocrine[iv]
- 11 reference groups and networks such as the Geriatric Assessment and Integration Network (GAIN), the French Language Health Services Advisory Group, and the Hospice and Palliative Care Network[v]
- multiple stakeholder consultations at key milestones, including project events and four primary care engagement sessions
- data analyses of current state and future demand, including population growth, disease prevalence and health system utilization[vi, vii, viii, ix, x]
- review of leading practice research[xi]
- broad community input from residents, stakeholders, and HSPs using a variety of methods: 12 public open houses, written input (e.g. more than 450 postcards), web-based communication and meetings with key stakeholders
- consideration of current initiatives underway in the LHIN designed to support access and quality patient services, including the Hamilton Health Sciences (HHS) Access to Best Care (ABC) Plan (September 2008)[xii], and the Niagara Health System (NHS) Hospital Improvement Plan (HIP) (December 2008)[xiii]
- consideration of provincial priorities (e.g. alternate level of care (ALC), chronic kidney disease, diabetes prevention and management, e-Health, emergency department (ED) wait times, family health care, mental health and addictions, and patient flow).

2.3 Process

Figure 1 summarizes the Clinical Services Plan timeline, and key activities.

Figure 1. Clinical Services Plan Timeline



Eighteen PAGs were convened to provide expert advice informing the development of the Plan[iv]. The PAGs met three times during May and June 2009. A workbook (the PAG meeting guide) was developed[xiv] to guide and document deliberations. Data, examples of leading best practices[xi], and information from the reference groups and existing networks were included in the PAG meeting guide along with templates for completion.

The deliverables of the PAGs, in relation to their clinical program area, were to:

- Describe the strengths and challenges within the existing health care system in addressing population health care needs across the continuum of care.
- Identify leading factors that influence the future demand for health care.
- Develop a high level, HNHB LHIN-wide, ideal service delivery model for the PAG target population.
- Identify prerequisites, enablers and challenges to implementation of the ideal service delivery model.

The process was designed to identify opportunities for improvement in the health care system that will keep people healthy, get them good care, and foster sustainability.

The Steering Committee deliberated on the results of the PAG work and other inputs[xv], and developed a plan that sets out the vision and roadmap for transforming the local health care system.

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3.0 FINDINGS

The Plan identifies opportunities for improved population health status, access to care, and system sustainability. The Steering Committee focused on the requirements for effective and efficient clinical services to meet these improvement directions.

The Plan is organized into three themes consistent with the LHIN Vision:

- keeping people healthy
- getting them good care
- sustainability.

3.1 Keeping People Healthy

Challenge

An analysis of health service utilization and key determinants of health for HNHB LHIN residents reveals that LHIN residents have higher than provincial rates of preventable conditions related to lifestyle behaviours (e.g. diabetes, heart disease, respiratory disease, and stroke)[xvi]. These conditions are putting pressure on the health care system (e.g. ED visits with conditions that are preventable, could be self-managed, or supported by a primary care provider).

What We've Learned

The following issues are important to support healthy living:

- health promotion, screening and disease prevention
- social determinants of health.

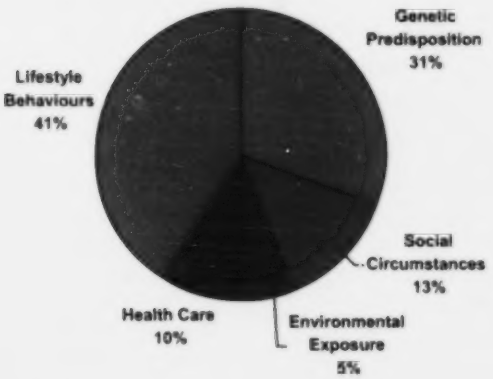
PAGs and HNHB LHIN residents consistently highlighted the need for an increased focus on the areas of health promotion, health screening, and disease prevention (e.g. better coordination and increased uptake of best practices/screening protocols).

People want:

- *to be involved in decisions about their care and support*
- *to learn how to adopt healthy lifestyles*
- *care practitioners to respect people's diverse characteristics, including values, customs, culture, language, beliefs.*

Health is mainly influenced by age, lifestyle, chronic conditions, and social circumstances, with the health care system itself having a limited role in influencing health. Figure 2 depicts the factors that contribute to an individual's health and longevity underscoring why a focus on health care alone is not sufficient to improve health status.

Figure 2. What Contributes to Health and Longevity?



Source: McGinnis JM, Williams-Russo P, Knickman JR. The Case for More Active Policy Attention to Health Promotion. Health AFF (Millwood) 2002; 21:78-93.

Age

The need for health care services increases with age, with hospital use rising sharply after age 65. More than 220,000 people 65+ years live in the HNHB LHIN, and over the next ten years, this age group will grow by 30%. Niagara, Haldimand, and Norfolk have the oldest populations of all areas in our LHIN, and our LHIN has the largest seniors population of all the LHINs in the province[xvii].

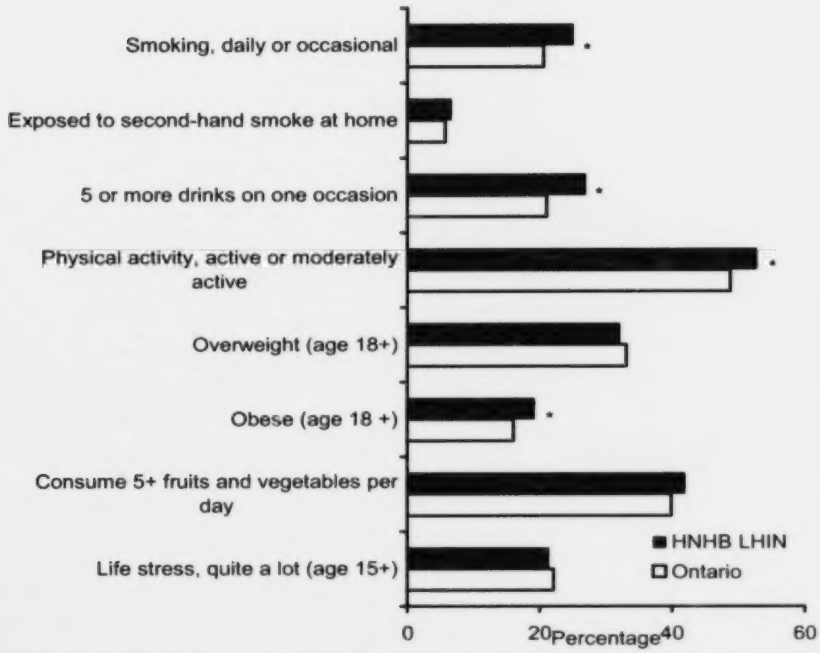
Lifestyle

The single greatest opportunity to improve health status and reduce premature deaths lies in changing personal behaviours[xviii]. Obesity, physical inactivity, and smoking are the leading lifestyle factors related to premature death. Relative to the province, there are significantly higher rates of smoking, heavy drinking and obesity in the HNHB LHIN (see Figure 3).

Chronic Conditions

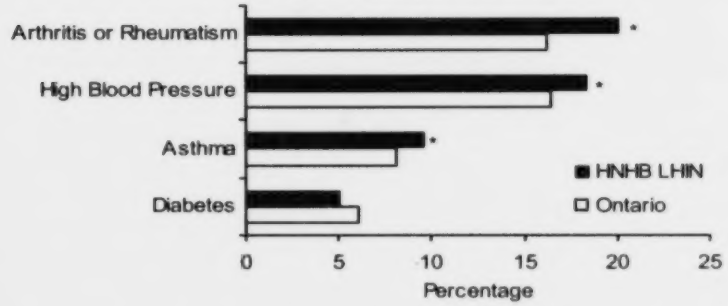
Chronic conditions, such as asthma and heart disease, are often related to lifestyle behaviours such as smoking and physical inactivity (see Figure 4). HNHB LHIN residents have higher rates of chronic conditions including arthritis, high blood pressure, and asthma compared to the province as a whole. Diabetes rates are slightly, but not significantly, lower than provincial rates. Variations in the prevalence of chronic conditions exist across the LHIN for specific population groups (e.g. there are higher rates of many chronic conditions among Aboriginal populations)[xix].

Figure 3. Health Practices in the HNHB LHIN and Ontario, Population Age 12+, 2007



Source: Canadian Community Health Survey, 2007. *Significantly different from provincial average.

Figure 4. Prevalence of Selected Chronic Conditions in the HNHB LHIN and Ontario, Population Age 12+, 2007



Source: Canadian Community Health Survey, 2007. *Significantly different from provincial average.

Social Circumstances

Low income and low education levels are associated with higher rates of illness, premature death, and use of health care services. About one in seven residents of the HNHB LHIN population live below the poverty line[xx]. Rates of low income are higher among population groups such as recent immigrants, Aboriginal Peoples, visible minorities, and female lone parents.

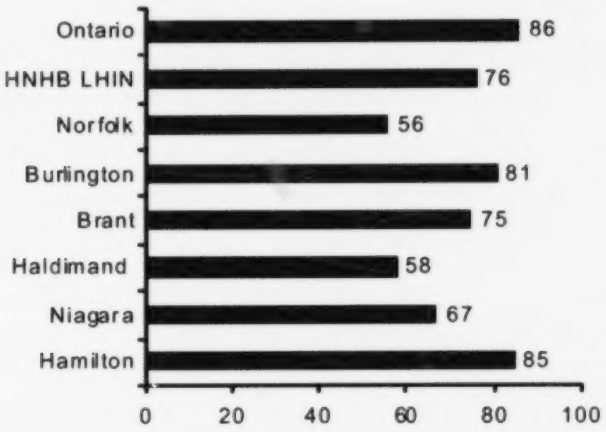
Availability and Access to Health Care

> ***Health Service Providers Told Us To:***
>
> - *enable people to take more responsibility for their health*
> - *make health promotion and disease prevention priorities for a healthier population.*

Most people get most of their health care, most of the time, in the community (not in hospitals), and most residents get most of their hospital-based services in the LHIN. There are 245 LHIN-funded programs in our LHIN, delivering a wide range of health services. The ministry has identified two populations who have distinct relationships with the government through legislation: Francophones and First Nations/Aboriginal communities. The *French Language Services Act, Ontario, 1986*[xxi], guarantees French speaking Ontarians reasonable access to health services in French. LHINs are mandated by the ministry to engage Francophone, First Nations, and urban and rural Aboriginal communities and to involve them in planning to support access to appropriate health services.

Access to a family physician is variable across the LHIN. In 2007, there were 76 family physicians per 100,000 residents in the HNHB LHIN, significantly lower than the provincial rate of 86 family physicians per 100,000 residents. The lowest rates are seen in Norfolk, Haldimand, and Niagara (see Figure 5). It is estimated that approximately 12% of HNHB LHIN residents (160,000 people) is without a family physician[xxii].

Figure 5. Rate of Family Physicians in the HNHB LHIN and Ontario per 100,000 population



Includes Family Medicine & Family Medicine/Emergency Medicine (data are not available separately)

Source: Physicians in Ontario 2007, OPHRDC & Ontario Ministry of Health and Long-Term Care, IntelliHEALTH ONTARIO.

The number of ED visits for conditions such as conjunctivitis, cystitis, ear infections, and upper respiratory infections (e.g. common cold, acute or chronic sinusitis) that could be managed elsewhere, is an indicator of limited access to primary care. In the HNHB LHIN, the highest rates of avoidable ED visits were observed among residents of Port Colborne, Haldimand County and Fort Erie (all with rates more than double the LHIN rate)[xxiii].

Addressing the Challenge

A significant proportion of residents in the HNHB LHIN are unhealthy. Healthy people and healthy communities are a shared responsibility among residents, human services with responsibility for income, housing, environmental health, health promotion, and disease protection, among others, and, health care.

The health system is not solely responsible for keeping people healthy. People need to take more responsibility for their own health. To support them, there needs to be a greater focus on health promotion, disease prevention, and screening. In addition, people need to be welcomed as part of the care team and be an active partner in decision-making about their care. We need better coordination and collaboration among primary care providers, public health, community-based health services and the broader municipal human services sector.

3.2 Getting People Good Care

Challenge

There is variation in health outcomes across the HNHB LHIN as reflected in higher than provincial rates of hospitalization and death. Access to quality health services, and use of best practice guidelines vary across the LHIN.

As we transform this health care system, we need to move from a focus on outputs (e.g. the number of patients seen by a HSP), to a focus on improved health outcomes (e.g. health status of residents).

What We've Learned

The following issues are required to ensure people get good care when they need it:

- access to comprehensive primary care
- availability of community-based health services
- access to specialized services
- uptake of best practice approaches to care.

People want:

- *care close to home*
- *a family doctor*
- *timely access to care*
- *to tell their health story once*
- *services and supports that are easy to find*
- *access to publicly funded alternative health care (e.g. naturopathy, chiropractic)*
- *good health outcomes.*

Hospitalization rates for ambulatory care sensitive conditions are a measure of access to primary care. These conditions include, for example, diabetes, asthma, hypertension, chronic obstructive lung disease, angina, and congestive heart failure. While not all admissions are avoidable, earlier primary care may have prevented or managed the illness or condition. The HNHB LHIN has a significantly higher rate of hospitalization for ambulatory care sensitive conditions compared to the province. In the HNHB LHIN, the highest rates of hospitalization for ambulatory care sensitive conditions were observed among residents of Brantford and specific communities in Niagara such as Fort Erie and Welland[xxiv].

There is variation in availability of community-based care and supports across the HNHB LHIN. Alternate level of care (ALC) is one indicator of access to post-acute hospital care. Acute ALC hospital days are days when a patient is occupying an acute care bed after the physician has determined the patient no longer requires the acute hospital services. The patient can be waiting for discharge home or another type of care (i.e. rehabilitation, long-term care, convalescent care, palliative care, or care at home with support).

Residents of the HNHB LHIN have higher rates of ALC days compared to the province. Within the LHIN, residents of Niagara and Hamilton have the highest number of ALC days. Patients with high ALC days include: frail seniors with complex and comorbid medical conditions (e.g. stroke, respiratory illness, dementia, renal failure, diabetes, heart failure), people who require rehabilitation services (e.g. post-stroke and post hip

replacement), and dying patients who require pain and symptom management (e.g. community-based palliative care)[xxv].

Available services for comprehensive wellness and illness care remain a challenge. Populations with low prevalence conditions requiring high intensity resources in short supply include persons aging with acquired brain injury, developmental disabilities, and amyotrophic lateral sclerosis (ALS), and persons with spina bifida and minor head injuries. Documented treatment gaps for children and youth include eating disorders, paediatric rehabilitation, ambulatory mental health services, and oncology.

Transportation to get to medical care and other health related appointments is not available for all people who need it. A transportation survey conducted by the HNHB LHIN in June 2009[xxvi] identified gaps in access to publicly funded transportation across the LHIN and a number of challenges related to maintaining service capacity (e.g. reliance upon a shrinking volunteer base).

Access to specialized health care is also an issue, and variation is seen across the LHIN. For example, wait times for knee replacement surgery are longer in the HNHB LHIN compared to other LHINs in the province. Between July and September 2009, nine out of ten patients at a hospital in our LHIN had their knee replacement surgery within 220 days compared to the provincial target of 182 days[xxvii].

Health Service Providers Told Us:

- *electronic connectivity is essential for timely and high-quality patient care*
- *some people in hospital don't need to be there*
- *the availability of community-based care varies across the LHIN*
- *wait times for services varies across the LHIN*
- *health care providers want to be supported in the use of best practices*
- *they need to know how to find the services their patients need, when they need them.*

HSPs want to provide high-quality care. Best practice guidelines are recognized as a clear enabler for quality care across our LHIN.

- The use of best practice guidelines among all health professionals will increase primary care capacity. For example, a guideline for recommended diabetes care is four or more Level of Hemoglobin A1C[xxviii] tests in the past year, having a foot check in the past 12 months, and an eye exam. Based on data from 2005 and 2007, only 14% of people with diabetes in our LHIN reported receiving this recommended care[xxix].

- Readmission rates are another indicator of access to quality care. For example, during April 2009, 6.8% of people discharged from hospital to home care through the HNHB Community Care Access Centre (CCAC) required readmission to hospital within 30 days of discharge[xxx].

- There is also variation in a standardized approach to program delivery across similar services. For example, a standardized needs-based assessment tool (SCREEN™) to identify persons nutritionally at risk, and for whom food services are important, has recently been introduced by the HNHB LHIN for use in all Meals on Wheels programs.

Addressing the Challenge

There is variation in health outcomes across our LHIN. Inequitable access to health services and variation in the application of best practice guidelines contribute to these outcomes. Hospitals have, in many cases, become the default health system treating people with preventable health conditions, and for whom other supports and self-care could have prevented serious illness. A more coordinated and standardized approach to care is needed, with all providers accountable for outcomes. A uniform mechanism for clarifying roles, responsibilities and accountabilities, such as a memorandum of understanding (MOU), is needed. It is critical that an electronic connectivity system be implemented as soon as possible.

3.3 Sustainability

Challenge

The health care system is challenged on a number of fronts: illness burden, labour costs, residents' expectations, and new technologies, among others. At the same time, the determinants of health suggest a need for greater shared responsibility for health status, healthy communities and health outcomes. The *Local Health System Integration Act, March 2006* (*LHSIA*)[i] compels HSPs and HCPs to work together for shared health outcomes. The case for sustainability within our means has never been stronger.

What We've Learned

There are four key challenges facing the sustainability of our health care system: health human resources, demand, asset renewal, and health care budget.

The health care workforce in the HNHB LHIN is aging. Health human resources are in limited supply. For example, by 2013, at the NHS, 41% of Registered Nurses (RNs) and 44% of Registered Practical Nurses (RPNs) will be eligible for retirement[xxxi]. The shortage of nursing resources leads to high overtime rates and sick time, putting additional financial pressures on the organization and the health care system.

Health Service Providers Told Us:

- *demand for health services exceeds current capacity*
- *there is a shortage of health care providers based on current patterns of practice.*

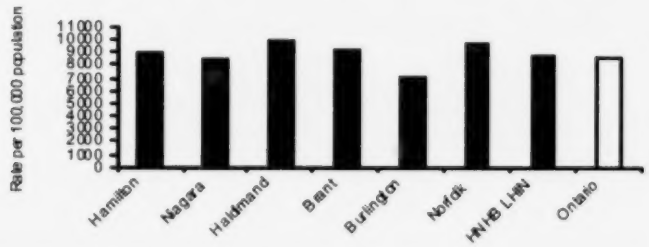
Similarly, our LHIN has a higher proportion of family physicians 65 years of age and older compared to the provincial average (approximately 12% of family physicians in our LHIN are 65 years of age and older compared to 10% for the province as a whole). The supply of specialists is also an issue. For example, our LHIN has a lower rate of endocrinologists and psychiatrists per population (1.6 times more people per endocrinologist in the HNHB LHIN compared to the province, and 1.4 times more people per psychiatrist in

the HNHB LHIN compared to the province)[xxxii]. Advanced medical technology is key to providing good care, and to the recruitment of new health professionals, but costly to purchase and maintain.

There are new professions emerging such as Physician Assistants (PAs), and other health professionals have expanded scopes of practice. For example, pharmacists can now prescribe certain drugs, a role that was previously limited to doctors, dentists and nurse practitioners. The integration of these new professions and roles require re-evaluation of current models of practice to ensure professionals are maximizing their full scope of practice.

The acute care hospitalization rate for residents of the HNHB LHIN is significantly higher than the provincial rate (see Figure 6). In 2007-08, more than 96,000 HNHB residents stayed in an acute care hospital, accounting for more than 125,000 stays. Hospital utilization patterns vary by socio-demographic characteristics. For example, seniors in the HNHB LHIN account for approximately 38% of acute hospital stays and represent approximately 16% of the population[xxxiii].

Figure 6. Acute Care Hospitalizations by Location of Residence, 2007-08



Source: 2007-08 Inpatient Discharge Main Table, Ontario Ministry of Health and Long-Term Care, IntelliHEALTH ONTARIO.

Notes: The acute care hospitalization rate is age-standardized. This means it is adjusted for variations in population age distributions over time and place.

HNHB LHIN residents use hospitals within our LHIN for most of their hospital care. Overall, less than seven percent of acute care hospitalizations for HNHB LHIN residents occurred at hospitals outside of our LHIN, and only approximately six percent of acute stays at hospitals within the HNHB LHIN were from residents who did not live in our LHIN. There is variation across the LHIN. For example, residents in Niagara and Hamilton were much less likely to travel outside of the HNHB LHIN for hospital care than residents of Burlington, due to the proximity of other services[xxxiv].

People expect:

- *timely access to health practitioners and services*
- *accountability for decisions about the local health system*
- *accountability for public expenditures.*

Due to population growth and aging, by 2022, the demand for health care services is projected to grow by approximately 30% if current patterns of health care use remain the same. This applies to both hospital and community-based health care services. While the growth in demand for acute hospital services is projected

for all clinical program areas, the rate of projected growth varies by clinical program area and geography (e.g. highest growth is projected for vascular and cardiac services due to the aging population; Hamilton and Niagara continue to require the highest volume of hospital-based services because they have the largest populations, but the demand for acute hospital services is expected to grow the fastest in Burlington because the population there is projected to grow the fastest). Respiratory illness and heart failure will continue to be the leading conditions accounting for the highest number of hospital inpatient days across the HNHB LHIN.

Hospitals are expensive care settings. Buildings, equipment and diagnostics are expensive to sustain and renew, and multi-site equipment purchases are very costly. In spite of declining revenues, the capital costs of maintaining infrastructure in the health care sector continue to increase. Within the financial resources provided by the government, capital resources are limited, as are operating dollars post-capital project completion. For this reason, capital planning must be guided by LHIN-wide population needs-based health systems planning.

At the national level, health care spending reached 10.7% of the gross domestic product (GDP) in 2008, the highest share ever recorded. In 2008, hospitals accounted for 28.0% ($48.1 billion) of total health care spending, down from 30.7% in 1998 and 44.7% in 1975[xxxv]. Provincial revenues are falling due in large part to the shrinking corporate tax base. Ontario's corporate tax revenue dropped by 48% during the 2008-09 fiscal year. As a result of falling revenues and investments, the government is projecting a deficit of $24.7 billion for 2009-10[xxxvi]. This will likely decrease the amount of money available to fund health services in Ontario.

Addressing the Challenge

If the current patterns of utilization persist, the demand for health services will continue to exceed capacity, resulting in longer wait times and poor outcomes. Changes in the way services are delivered and utilized must occur. The focus of care must be shifted from the hospital, where appropriate. It is imperative that we reorganize the current configuration of clinical programs, and redistribute resources to realize decreased hospitalization rates and lengths of stay. Funding is will be contingent on accountability for improved health outcomes, and tough decisions will need to be made.

To ensure the appropriate supply of health human resources, all HCPs must participate in the education of health care learners.

4.0 THEMES

The Plan identifies improvement opportunities to keep people healthy and get them good care, and to sustain the health care system. Implementation of these opportunities will support a more integrated approach to care.

The Plan advocates three foundational pillars for health system improvement:

- Interprofessional care
- Clinical program integration
- Community-based health service capacity.

These themes are interdependent and will support achievement of the LHIN Vision like a three-legged stool (see Figure 7), with each leg of the stool providing an essential support to the structure.

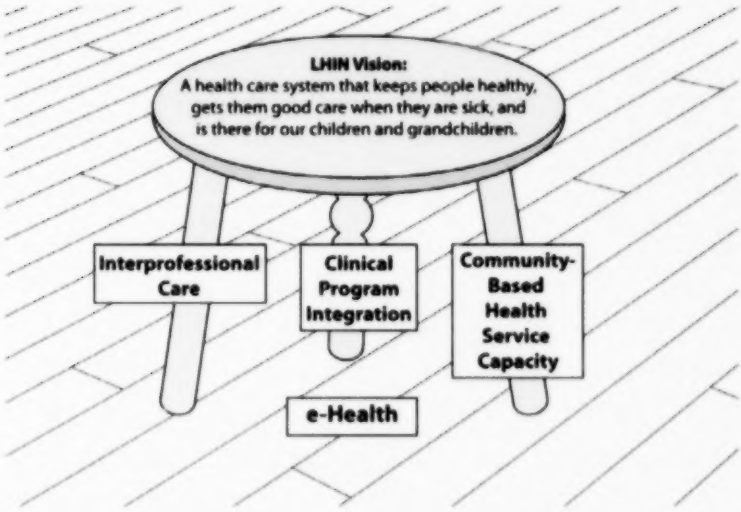
e-Health is a critical success factor for successful implementation of the three themes. In the 2006 e-Health Strategic Plan[xi], the LHIN e-Health Steering Committee defines e-Health as:

> *"An information-enabled model of health care where providers and their patients utilize information and communication technologies, including Internet technologies, to plan, arrange, deliver, manage and account for care and achieve wellness in ways that protect individual privacy and sustain viability of the health system."*

e-Health will:

- reduce the need to repeat diagnostic tests, resulting in quicker, more effective care
- improve communication between, and amongst, local and regional hospitals, physicians, and HCPs, reducing the need to repeat health information multiple times
- provide information to make informed decisions about personal health
- provide opportunity for easier collaboration between HCPs, resulting in improved care plans.

Figure 7. Achievement of the LHIN Vision



Interprofessional care that supports collaboration across the continuum of care from community-based services to highly specialized services will support clinical program integration. Clinical program integration is required to improve access to, and coordination of, clinical programs across the continuum of care, and to reduce unnecessary and expensive duplication of services. Enhancing the capacity of community-based services will enable care to be given closer to home, and address gaps in services across the continuum of care. Community-based services will work collaboratively with more specialized clinical services in an interprofessional approach to care that will optimize care, and allow more specialized clinical services to focus on what they can do best.

4.1 Interprofessional Care

What is Interprofessional Care?

Interprofessional care is the provision of comprehensive health services to individuals by multiple HCPs who work collaboratively to deliver quality of care within and across settings[xxxvii].

Interprofessional care is not a new concept. Collaborative, team-based approaches to care have been recognized as the optimal model for the delivery of care across Canada[xxxviii]. In this model of care delivery, HSPs and the individual work together, enabling the individual to have a larger role in the management of their own health. Interprofessional care teams are important placements for educating all health care learners.

Within our LHIN, there are examples of collaborative, interprofessional models of care organized around palliative care, geriatrics, cancer care and mental health. In Ontario, interprofessional practice is building on the experience in, for example, CHCs and FHTs. Interprofessional teams link services and people including family physicians and specialists, RNs, RPNs, dieticians, therapists, social workers and others (see Figure 8).

Figure 8. Interprofessional Care Providers

A shared care approach will employ best practice standards and will enable health professionals to work within their core competencies. There are benefits for individuals as well. Individuals will have timely access to a variety of health professionals who can help them with preventative care, and/or treat a specific illness or condition. Members of this "interprofessional team" might be co-located in one place, or function as a virtual team in multiple sites, connected electronically. Virtual interprofessional teams, enabled by videoconferencing and other e-Health strategies, will be necessary because of the HNHB LHIN's large geographic area and required linkages with a variety of HCPs.

Why Do We Need Interprofessional Care?

Improved collaboration and teamwork through interprofessional care will assist HCPs to manage increasing workloads, reduce wait times, and improve the quality of care they provide. Improved collaboration and teamwork will also respond to unmet needs for primary care (e.g. inadequate access to primary care, and in turn, preventative care and self-management awareness that contribute to avoidable hospitalizations).

Among primary HCPs and organizations, there is a lack of communication, coordination and implementation of best practices for optimal outcomes. In addition, there is a lack of awareness among health professionals of the training and scope of practice of other health care professionals, and of professional and organizational mandates. Capacity and competency with information technology (IT) varies across the LHIN. There is little training and/or exposure to interprofessional care, and there are multiple interpretation of client-centered and client-directed care. Gaps are particularly acute in the areas of chronic disease management, mental health and care for frail elderly, where no single practitioner/entity can provide optimal care alone. Interprofessional care will respond to these challenges by providing the mechanism to support required changes.

What Will Be Different?

Many primary care providers are feeling pressured to provide more timely services, while at the same time working with finite human and financial resources. The interprofessional model of care will enable all health professionals to work to their full scope of practice allowing HCPs to focus on care within their realm of expertise. This will optimize workplace satisfaction for primary care providers, and assist with recruitment of new primary care providers.

HSPs will work collaboratively to deliver comprehensive health services and quality care within and across settings with a greater focus on health promotion, disease prevention, screening and self-management. Implementation of an interprofessional model of care across the LHIN will:

- ensure access to comprehensive primary care
- facilitate access to specialized services
- enhance service coordination and transitions across sectors/care settings
- support self-management.

Within the HNHB LHIN, ClinicalConnect has been designated as the tool to share information between hospitals and physicians' offices. HHS and St. Joseph's Healthcare Hamilton (SJHH) are now using ClinicalConnect with an approved schedule to bring on all other hospitals within our LHIN. HSPs and community agencies within the HNHB LHIN must be electronically connected. It is essential to provide faster and more accurate communication between all providers. This electronic communication will avoid duplication of investigations and patients will not have to tell their health story repeatedly.

Residents have also told us they want the ability to connect electronically with their HCPs to allow more self-management of their own health. Current information and education will also be available to patients through web-based portals, allowing them to follow and track their own health status (e.g. blood pressure, weight, blood sugars). Interprofessional care will enable individuals and their families to be more actively involved in managing their health conditions, and ensure they can count on the right care at the right time. Residents in every community will have access to HCPs who are committed to providing effective, quality of care through the use of best practice guidelines.

4.2 Clinical Program Integration

What is Clinical Program Integration?

Clinical program integration will result in coordinated, LHIN-wide programs, led by one or more organizations in partnership, and reflect an agreed upon set of attributes. These attributes include:

- clear roles, responsibilities and accountabilities
- a commitment to best practice and the implementation of clinical standards and guidelines
- common admission, discharge, and referral guidelines
- elimination of unnecessary duplication of low volume, high-complexity services
- LHIN-wide population-based planning, evaluation and performance monitoring.

Each LHIN-wide clinical program will have, as its goal, equitable access to a coordinated system of evidence-based services across the continuum of care. To achieve this, strong leadership, mechanisms that support shared accountability and partnerships, and an enhanced communications infrastructure will be needed.

This means that all residents of our LHIN, regardless of whether they live in a rural or urban community will have equitable access to services. All aspects of care delivery for a particular program will be connected and coordinated, in a way that best meets population need, and optimizes use of available resources.

Why Do We Need Clinical Program Integration?

The health care system is large and complex. LHIN residents count on having the same access to quality care. Health care professionals expect timely referrals, access to an individual's clinical information, access to best practices, tools, and equipment. It is essential for the future of our health care that we ensure accountability for appropriate access, quality of care (e.g. best practice standards, guidelines and performance metrics) and the efficient use of resources.

As individual organizations realign services to meet budget constraints, clinical program integration will provide mechanisms for organizations to work with their partners to integrate or transfer services more appropriately delivered in the community[xxxix].

Clinical program integration will allow the HNHB LHIN to better respond to evolving population health care needs, advances in medical and information technology, and the scarcity of health human resources.

What Will Be Different?

Organizations will have clear roles, responsibilities and accountabilities. Clinical program integration will be achieved by a clear shared accountability by all providers that will result in equitable distribution of services, reduction in duplication of services, and a more efficient use of human and equipment resources.

The development of common clinical leadership teams, with clear referral patterns and repatriation agreements, will reduce wait times and improve consistent access across our region. It will be much easier for the residents of the HNHB LHIN to navigate through our health system. It will be an expectation that all HSPs will use best practice guidelines and clinical standards when providing care.

4.3 Community-Based Health Service Capacity

What is Community-Based Health Service Capacity?

Community-based health services support independent living (e.g. supportive housing, food, transportation, congregate programs), prevent hospitalization (e.g. falls prevention, palliative care, alternative medicine, and ambulatory services) and sustain early detection and intervention initiatives (e.g. case finding programs, wellness programs, diabetes education, foot care for people with diabetes). We need community services that are linked with primary care to provide a comprehensive basket of care and support close to home.

Why Do We Need Community-Based Health Service Capacity?

Most people get most of their health care, most of the time, in the community. Ministry-funded (now LHIN-funded) community support services have evolved independent of each other in response to local needs. Many have multiple funders and accountabilities, employ a range of health professionals, and engage volunteers. Existing programs and services are challenged by changing population needs (e.g. growing demands for service and clients with complex needs), and resource limitations (e.g. shortage of health professionals and volunteers, wage disparities with other sectors, funding constraints, and a competitive fundraising environment).

From the individual's perspective, it can be hard to find services, know which services to use, and difficult to travel to services. Services are not equitably distributed across the HNHB LHIN, and there is a lack of standardized tools for assessment, care planning, and outcomes evaluation. Improving access to the right community services and linkages across the continuum of care will support a more seamless and coordinated approach to care.

What Will Be Different?

Standardized tools, protocols, and a culture of continuous quality improvement (e.g. consistent eligibility, assessment and referral criteria, and outcome-based performance benchmarks), will optimize the use of resources in the community sector. Clarity regarding the services available and how to connect to these services will improve appropriate access to services close to home. Linkages across the continuum of care will facilitate a more coordinated approach to care delivery and seamless transitions across care settings.

5.0 IMPLEMENTATION

It is imperative that the HNHB LHIN implement interprofessional care and clinical program integration and improve community health service capacity. This will require strong leadership, clear commitment of all HSPs, and tough decisions.

The HNHB LHIN has an e-Health strategy[xi]. The DI-r program, which allows diagnostic investigations to be viewed by appropriate health professionals anywhere within our LHIN, will be implemented over the next three years. ClinicalConnect will be available to all hospitals and the HNHB CCAC within the first year. An electronic medical record (EMR) needs to be available for any HCP in our LHIN. Working with the Ontario Medical Association and the provincial e-Health office, a strategy for the implementation of an affordable EMR must be developed.

Common across each of these themes, best practice is an essential requirement to ensure quality of care across our LHIN. Our academic facilities have developed best practice guidelines that are recognized nationally and internationally. Formal linkages with the academic sector will support ongoing performance evaluation and quality improvement. All HCPs will participate in quality improvement and performance evaluation.

Within our LHIN, we have several academic facilities that provide training for our future HCPs. It will be an expectation over the next several years that all current HSPs will participate in the training of these learners.

Each of the themes has a specific implementation strategy that will require strong leadership over the next several years. This LHIN is fortunate to have informal and formal leaders who have demonstrated their readiness to move forward on our roadmap.

5.1 Interprofessional Care

How Will We Get There?

There is high readiness to expand and adopt interprofessional care across the HNHB LHIN. This readiness is aligned with the Ontario experience where the "team" approach has been evident in palliative care, cancer care, critical care and stroke care. Recent Ontario investments in FHTs and CHCs, and a heightened focus on interprofessional education, confirm Ontario's and LHINs' commitment to interprofessional care.

Building on existing models, the HNHB LHIN will implement and evaluate an interprofessional care team pilot. The pilot will help identify success factors for interprofessional care, and demonstrate its value-added contribution to comprehensive primary care. An interprofessional care best practice toolkit will be developed to support expansion of virtual interprofessional care across the LHIN, including scope of practice for health professionals. Dissemination and uptake of best practice is foundational to interprofessional care and LHIN-wide projects will be established and implemented.

5.2 Clinical Program Integration

How Will We Get There?

Implementing clinical program integration will be a multi-year undertaking in partnership among leaders from across the HNHB LHIN. A "LHIN-wide charter" will reflect organizational commitment to a shared change agenda for clinical program integration. Already, MOUs are formalizing roles, responsibilities and accountabilities among organizations. For example, HHS, NHS, and Cancer Care Ontario (CCO) have signed a MOU to create an integrated cancer program between the Juravinski Cancer Centre (Hamilton) and the Walker Family Cancer Centre (St. Catharines). In addition, HHS, SJHH, and NHS are developing a template MOU for integrated programs.

LHIN-wide integrated programs are the desired outcome. In order to achieve this in a timely manner, the coordination of planning and implementation activities across program areas is required. Clinical programs will be examined in a phased approach. Existing mechanisms, resources and leadership will be leveraged to expedite implementation planning.

Implementation plans for clinical program integration will optimize access, quality and efficiency across the continuum of care. Components of the implementation plan will include:

- recommended sizing and siting of programs and services
- mechanisms, structures and elements needed to foster shared accountability across the continuum of care (e.g. MOUs)
- implementation of appropriate best practice guidelines (assisted by our academic partners)
- identification of key enablers to implementation (e.g. standardized processes, information/communication technology)
- resource requirements, both human and infrastructure to support implementation.

These plans will build on the advice of the PAGs regarding ideal service delivery models, as well as prerequisites and enablers to implementation of these models[xv].

The sizing and siting of clinical programs will be informed by initial data analyses developed by the HNHB LHIN, through this clinical services planning process[vi, vii, viii, ix, x].

Further refinement of the projections to establish the sizing of clinical programs will be required to ensure that future capacity accounts for unmet needs, reflects anticipated impact of advances in medical technology and new techniques/ways of delivering health care that may improve efficiencies in care delivery, and shift care from inpatient to outpatient and/or community settings, wherever appropriate.

Once the sizing estimates are completed, the physical location of clinical program capacity will be determined. Deliberations for siting programs must find the best balance among the following siting criteria:

- access (i.e. promote access to care close to home)
- quality (i.e. 'critical mass' of patients and HHR, infrastructure requirements, best practice service delivery models)
- efficiency (i.e. optimize use of resources).

In addition, plans must identify interdependencies in the siting of services.

5.3 Community-Based Health Service Capacity

How Will We Get There?

Community services for health, wellness and recovery will be aligned with population health improvement goals. Demand modeling tools and improved client matching processes will together identify gaps in service and required supports (e.g. supports in the home, transportation) and link people with the right care in the right place. Required enablers for community services include:

- adoption of common assessment, referral and performance metrics
- readily available client/patient information for timely and appropriate care planning
- infrastructure investment for integrated communication technology (e-Health) action planning linkages with public health (promotion, prevention, screening), and municipalities (housing, social services).

Strategies for robust community services will improve patient/client flow (right care, right time, right place), and reduce inappropriate demand for hospital care.

The HNHB LHIN will support the availability of appropriate services close to home by expanding availability of supportive living environments, and by supporting self-management to improve resident's quality of care and health outcomes.

5.4 Priorities for Action and Early Starts – Using Existing Resources

Year 1: 2010-11	Year 2: 2011-12	Years 3+: 2012 and beyond
Implementation of interprofessional model of care: • implement and evaluate a 'virtual' interprofessional care model • develop interprofessional care toolkit to support interprofessional care model dissemination in the LHIN • maximize health professionals' scope of practice. Implementation of clinical program integration: • LHIN-wide charter for clinical program integration endorsed by hospital leadership • realignment of the following program areas across the continuum of care: o cancer care o complex continuing care and rehabilitation o hepatobiliary o maternal/newborn o vascular and thoracic. o . • development of a functional plan for a LHIN-wide integrated laboratory medicine program, to support clinical program integration - for capital approval • establish LHIN-wide hospital common credentialing to support clinical program integration for physicians, dentists, midwives, and nurses. Realignment of community-based health service capacity: • establish peritoneal dialysis units in three long-term care homes • enhance organizational capacity in the community sector through process improvements (e.g. pilot common tools and processes to link clients/patients to appropriate community based services) • implement 'demand modeling tool' to identify service gaps in community sector • implement strategies and fund initiatives (e.g. through Aging at Home) to address service gaps in community sector • expansion of diabetes education centres • expansion of foot care services for high risk diabetics – starting in Niagara and Hamilton • implement falls prevention strategies across the LHIN • implement common client eligibility criteria for LHIN-funded transportation programs. Implementation of e-Health activities: • implementation of regional Diagnostic Imaging Repository (DI-r) at St. Joseph's Healthcare Hamilton, Hamilton Health Sciences Corporation, West Lincoln Memorial Hospital, Niagara Health System • expand access to ClinicalConnect to all HNHB LHIN hospitals and HNHB CCAC to enable HCPs to obtain patient/client health information, diagnostic imaging and medical/lab test results in 'real' time • implement CCAC 'resource matching' tool to connect clients to services.	Implementation of interprofessional model of care: • expand interprofessional care models into a minimum of two additional communities • formalize linkages with academic sector to support ongoing performance measurement, evaluation and quality improvement processes • establish a process and implement two best practice or quality projects LHIN-wide every year. Implementation of clinical program integration: • realignment of the following program areas across the continuum of care: o cardiac o chronic kidney disease o diabetes o emergency/trauma o mental health and addictions o paediatrics. Implementation of community-based health service capacity: • ongoing 'demand modeling' for continuous improvement • ongoing implementation of strategies and funding of initiatives (e.g. through Aging at Home) to address service gaps in community sector • LHIN-wide application of common tools and processes to link clients/patients to appropriate community-based services. Implementation of e-Health activities: • connect remaining LHIN hospitals to DI-r	Implementation of interprofessional model of care: • expand interprofessional care models LHIN-wide • establish screening/health promotion targets LHIN-wide. Implementation of clinical program integration: • realignment of the following program areas across the continuum of care: o ear, nose, and throat o chronic pain o gastroenterology o neurosciences o ophthalmology o orthopedics o respiratory o specialized geriatrics o urology. Implementation of community-based health service capacity: • continue to address gaps in community capacity based on estimates of unmet need for services. Implementation of e-Health activities : • HNHB LHIN HSPs fully connected electronically • establish patient portals to provide access to health care information and support self management of chronic health conditions.

6.0 CONCLUSION

The Steering Committee has learned a great deal about the local health system, and has heard from HSPs and HCPs, the public and other stakeholders. The Plan summarizes what we have learned in the context of our vision for the local health system – keeping people healthy, getting them good care when it is needed, and being there for future generations.

Three key directional themes arose from all that was heard and learned. To achieve our vision, we will need to improve the capacity of community-based services, adopt interprofessional care as the way of providing care, and integrate clinical programs on a LHIN-wide basis, across the continuum of care. What these themes represent, why they are needed, and how we will get there comprises much of the discussion in the report.

Taken together, implementing these three themes will change the local health system in the HNHB LHIN, creating a more efficient, affordable, and sustainable future to meet the specific needs of the HNHB LHIN population.

Successful implementation of the Plan will lead to improved experiences for residents, their families, and HCPs. At the individual level, the following day-to-day experiences will change for HNHB LHIN residents:

- residents will only have to tell their health history once
- residents will not have to undergo the same tests for different HCPs
- the right care will be provided in the right place at the right time
- residents will have access to the primary care and community services they need in a timely manner
- individuals will have improved access to local community disease prevention and wellness services
- individuals will have improved access to information to support self-management and decision-making.

At the professional level, the following experiences will change:

- HCPs will have improved electronic linkages with other HCPs, and timely, secure access to an individual's records (e.g. prescription history, hospital admissions, and referrals to other HCPs)
- HCPs will use standardized practice guidelines, in order to support the right care, in the right place, at the right time
- formal linkages will be developed between HSPs (including community-based groups) in order to improve access to continuity of care
- HCPs will work in interprofessional teams maximizing their scope of practice to support care delivery across the HNHB LHIN
- HCPs will participate in an increased focus on performance measurement for quality and outcome monitoring, driven at the HNHB LHIN level.

With the submission of this report, the Steering Committee is handing over the next steps to the HNHB LHIN. Incorporating priorities for action and early starts into the HNHB LHIN's IHSP (2010-13) will provide our LHIN with a blueprint for action. As with the Plan's process, successful implementation of the IHSP (2010-13) will require continued engagement and listening, along with an evidence-based, collaborative approach to planning.

GLOSSARY OF TERMS

Abbreviation	Definition
ABC	Access to Best Care Plan (Hamilton Health Sciences Corporation)
ACG	Adjusted Clinical Groups
ALC	Alternate Level of Care
ALOS	Average Acute Length of Stay
ALS	Amyotrophic Lateral Sclerosis
ALSSH	Assisted Living Services Supportive Housing
CCAC	Community Care Access Centre
CCS	Community Support Services
CDPM	Chronic Disease Prevention Management
CHCs	Community Health Centres
CCHS	Canadian Community Health Survey
CIHI	Canadian Institute for Health Information
CMG	Case Mix Group
CCO	Cancer Care Ontario
DI-r	Diagnostic Imaging Repository
ED	Emergency Department
EMR	Electronic Medical Record
FHTs	Family Health Teams
GAIN	Geriatric Assessment and Integration Network
GDP	Gross Domestic Product
HCPs	Health Care Providers (i.e. individuals)
HIP	Hospital Improvement Plan
HHR	Health Human Resources
HHS	Hamilton Health Sciences
HNHB	Hamilton Niagara Haldimand Brant
HSPs	Health Service Providers (i.e. organizations)
ICES	Institute for Clinical Evaluative Sciences
IHSP	Integrated Health Service Plan
IT	Information Technology
LHIN	Local Health Integration Network
LHSIA	Local Health System Integration Act
ministry	The Ministry of Health and Long-Term Care
MOU	Memorandum of Understanding
NHS	Niagara Health System
OPHRDC	Ontario Physician Human Resources Data Centre
PAs	Physician Assistants
PAGs	Planning Advisory Groups
The Plan	Clinical Services Plan
RNs	Registered Nurses
RPNs	Registered Practical Nurses

Abbreviation	Definition
SCREEN™	A screening tool, developed by Dr. Heather Keller at the University of Guelph, which identifies persons who may be at nutritional risk. Nutritional risk screening is the process of identifying characteristics known to be associated with dietary or nutritional problems, and to differentiate individuals who are at high risk of nutritional problems or have poor nutritional status. Dr. Keller is a renowned expert in the nutrition of older adults.
SJHH	St. Joseph's Healthcare Hamilton
The Steering Committee	The HNHB LHIN Clinical Services Plan Steering Committee
Workbook	The PAG Meeting Guide

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ISBN 978-1-4435-1762-1 | 500 November 2009 @ 2009 Queen's Printer for Ontario